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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,138	02/08/2001	Hirokazu Fujino	0020-4783P	5320

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EXAMINER

LEO, LEONARD R

ART UNIT PAPER NUMBER

3753

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/719,138

Applicant(s)

FUJINO ET AL.

Examiner

Leonard R. Leo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 7 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152).
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 29, 2005 has been entered.

Claims 3 and 6-9 are pending, and claims 3 and 8 remain withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6-7 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification lacks an adequate written description of the invention. There is no basis in the specification for "secondary grooves extending *continuously* from one side surface of the projected portions to the other side surface thereof."

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US) in view of Shikazono et al.

Ishikawa et al (US) discloses all the claimed limitations except secondary grooves on the projected portions.

Shikazono et al discloses a heat-transfer pipe comprising a plurality of grooves 3 and projection portions 2 having a plurality of secondary grooves extending continuously from one side to the other side of the projection portions (Figure 17a) for the purpose of improving heat exchange (column 11, lines 23-31).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ishikawa et al (US) secondary grooves for the purpose of improving heat exchange as recognized by Shikazono et al.

Claims 6-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (10-300379) in view of Shikazono et al.

Sasaki et al (10-300379) (Figure 6b, 6d or 7b) discloses all the claimed limitations except secondary grooves on the projected portions.

Shikazono et al discloses a heat-transfer pipe comprising a plurality of grooves 3 and projection portions 2 having a plurality of secondary grooves extending continuously from one

side to the other side of the projection portions (Figure 17a) for the purpose of improving heat exchange (column 11, lines 23-31).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Sasaki et al (10-300379) secondary grooves for the purpose of improving heat exchange as recognized by Shikazono et al.

Regarding claims 6-7, the similar structured device of the combination Sasaki et al (10-300379) and Shikazono et al is believed to be manufactured in a manner similar to applicants' claimed invention. Figure 8 of Sasaki et al (10-300379) is particularly pertinent.

Claims 6-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyotani in view of Shikazono et al.

Kiyotani (Figure 5b) discloses all the claimed limitations except secondary grooves on the projected portions.

Shikazono et al discloses a heat-transfer pipe comprising a plurality of grooves 3 and projection portions 2 having a plurality of secondary grooves extending continuously from one side to the other side of the projection portions (Figure 17a) for the purpose of improving heat exchange (column 11, lines 23-31).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Kiyotani secondary grooves for the purpose of improving heat exchange as recognized by Shikazono et al.

Regarding claims 6-7, the similar structured device of the combination Kiyotani and Shikazono et al is believed to be manufactured in a manner similar to applicants' claimed invention. Figure 6 of Sasaki et al (10-300379) is particularly pertinent.

### *Response to Arguments*

The rejection in view of Schuez et al is withdrawn in view of the amendment to the claims.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

With respect to the primary references of Ishikawa et al (US) and Sasaki et al (10-300379), the recitation of "first and second row being adjacent" is met by the references. Structures may be adjacent, i.e. near or close to one another in proximity, but not abutting or contacting one another. Thus, the rows of grooves in the references are adjacent to each other. Furthermore, the adjacent rows of grooves in Ishikawa et al (US) and Sasaki et al (10-300379) having a common depth with respect to the pipe intersect at a common longitudinal or axial groove to form "V-shaped" patterns. There is nothing in the claim to preclude this reading.

The secondary reference of Shikazono et al explicitly teaches one of ordinary skill in the art to employ a plurality of secondary grooves extending continuously from one side to the other side of the projection portions (Figure 17a) for the purpose of improving heat exchange (column 11, lines 23-31).

In order to expedite prosecution, the rejection in view of Kiyotani in view of Shikazono et al is applied. Kiyotani et al (Figure 5b) discloses first and second rows of grooves being immediately adjacent, such that the projected portions defining the grooves intersect.

### *Conclusion*

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3753

June 21, 2005